

Claims

1. Method of positioning electrodes in an electrode array comprising at least five electrodes for central nervous system (CNS) monitoring from the forehead of a patient's head, the method comprising the steps of:

5 positioning a first electrode above the eyebrows near frontalis and orbicularis muscles of the patient;

 positioning a second electrode above the first electrode the fronto-lateral area of the frontal lobe of the patient and on the same hemisphere as the first electrode;

10 positioning a third electrode above the eyebrows near frontalis and orbicularis muscles of the patient at the opposite hemisphere when compared to the first electrode;

 positioning a fourth electrode above the third electrode on the fronto-lateral area of the frontal lobe of the patient and on the same hemisphere as the third electrode; and

15 positioning a fifth electrode on the patient's skin.

2. The method of claim 1 wherein the second electrode is positioned as far as possible from the first electrode and the fourth electrode is positioned as far as possible from the third electrode.

20 3. The method of claim 1 wherein the fifth electrode is positioned on the area of the patient's skin having bone immediately under the skin.

4. The method of claims 2 and 3 wherein the areas on which the second, the fourth and the fifth electrode are positioned are hairless areas.

25 5. The method of claim 1, wherein the first, second, third and fourth electrodes are measuring electrodes and the fifth electrode is a ground electrode.

6. The method of claim 5, wherein FEMG is measured with bipolar connection between the first and the third electrode.

30 7. The method of claim 5, wherein EEG is measured with bipolar connection between the second and the fourth electrode.

8. The method of claim 5, wherein EEG from one hemisphere is measured between the first and the second electrode, and EEG from the other hemisphere is measured between the third and the fourth electrode.

35 9. The method of claim 1 wherein the fifth electrode is positioned on the head area of the patient.

10. The method of claim 9 wherein the fifth electrode is positioned at the centre of the area defined by the above mentioned four electrodes.

11. Method of positioning electrodes in an electrode array comprising at least five electrodes for central nervous system (CNS) monitoring from the forehead of a patient's head, the method comprising the steps of:

positioning a first electrode above the eyebrows near frontalis and orbicularis muscles of the patient;

positioning a second electrode to the temple of the patient at the same side of the head as the first electrode;

positioning a third electrode above the eyebrows near frontalis and orbicularis muscles of the patient at the opposite hemisphere when compared to the first electrode;

positioning a fourth electrode to the temple of the patient at the same side of the head as the third electrode, and

positioning a fifth electrode on the patient's skin.

12. The method of claim 11 wherein the temple is the area between and eye and an ear.

13. The method of claim 12 wherein the area is at eye level anterior of the ear.

14. The method of claim 11 wherein the fifth electrode is positioned on the area of the patient's skin having bone immediately under the skin.

15. The method of claim 14 wherein the fifth electrode is positioned on the head area of the patient.

16. The method of claim 15 wherein the fifth electrode is positioned at the middle area between the first and the third electrode.

17. The method of claim 11 wherein EEG is measured from one hemisphere by using the first and the second electrode, and EEG is measured from the other hemisphere by using the third and the fourth electrode.

18. Method of positioning electrodes in an electrode array comprising at least seven electrodes for central nervous system (CNS) monitoring from the forehead of a patient's head, the method comprising the steps of:

positioning a first electrode above the eyebrows near frontalis and orbicularis muscles of the patient;

positioning a second electrode above the first electrode on the fronto-lateral area of the frontal lobe of the patient and on the same hemisphere as the first electrode;

positioning a third electrode above the eyebrows near frontalis and orbicularis muscles of the patient at the opposite hemisphere when compared to the first electrode;

5 positioning a fourth electrode above the third electrode on the fronto-lateral area of the frontal lobe of the patient and on the same hemisphere as the third electrode;

positioning a fifth electrode on the patient's skin;

positioning a sixth electrode to the temple of the patient at the same side of the head as the first electrode, and

10 positioning a seventh electrode to the temple of the patient's head at the same side of the head as the third electrode.

19. The method of claim 18 wherein the temple is the area between and eye and an ear.

15 20. The method of claim 19 wherein the area is at eye level anterior of the ear.

21. The method of claim 18 wherein the fifth electrode is positioned on the area of the patient's skin having bone immediately under the skin.

22. The method of claim 21 wherein the fifth electrode is positioned on the head area of the patient.

20 23. The method of claim 22 wherein the fifth electrode is positioned at the centre area defined by the first, the second, the third and the fourth electrodes.